

POLY-(ADP) RIBOSE POLYMERASE ENZYME AND USES THEREOF

ABSTRACT OF THE DISCLOSURE

Poly(ADP)-ribose polymerase (PARP) becomes activated at sites of DNA damage and is thought to promote repair by modifying local chromatin proteins and transcription factors. Disclosed is an isoform of PARP, PARP-e, which lacks enzymatic function and which is encoded by a gene having a novel structure. Also disclosed are methods of modulating chromatin structure resulting in modulation of gene activation, gene repression and chromatin condensation and decondensation.